=>

Uploading C:\Program Files\Stnexp\Queries\10526280.str

```
chain nodes :
10  11  13  15  17
ring nodes :
1  2  3  4  5  6  7  8  9
chain bonds :
1-10  9-11  13-15  13-17
ring bonds :
1-2  1-6  2-3  3-4  4-5  5-6  5-7  6-9  7-8  8-9
exact/norm bonds :
1-2  1-6  1-10  2-3  3-4  4-5  5-6  5-7  6-9  7-8  8-9  9-11  13-15  13-17
isolated ring systems :
containing 1 :
```

G1:0,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS 11:CLASS 13:CLASS 14:CLASS 15:CLASS 17:CLASS

L1 STRUCTURE UPLOADED

=> d 11

G1 O, N

L1 HAS NO ANSWERS

L1 STF

Structure attributes must be viewed using STN Express query preparation.

=> s 11 sss sam

SAMPLE SEARCH INITIATED 08:19:38 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 351 TO ITERATE

100.0% PROCESSED 351 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 5896 TO 8144
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s ll sss ful

FULL SEARCH INITIATED 08:19:58 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 7456 TO ITERATE

100.0% PROCESSED 7456 ITERATIONS 22 ANSWERS

SEARCH TIME: 00.00.01

L3 22 SEA SSS FUL L1

=> => s 13

L4 5 L3

 \Rightarrow d 14 1-5 bib, ab, hitstr

```
ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
T. 4
     2007:485679 CAPLUS
ΑN
     146:482093
DN
     Substituted hydroxytetrahydropyrrolopyrazinones and substituted
ΤI
     hydroxytetrahydropyrazolopyrazinones, processes for preparing them,
     pharmaceutical compositions containing them, and their use as HIV
     integrase inhibitors
     Wai, John S.; Williams, Peter D.; Lyle, Terry A.
IN
PA
     Merck & Co., Inc., USA
     PCT Int. Appl., 51pp.
SO
     CODEN: PIXXD2
DT
     Patent
                                                           not prior
     English
LA
FAN.CNT 1
                           KIND
                                  DATE
                                               APPLICATION NO.
     PATENT NO.
                                                                        DATE
     WO 2007050510
                            Α2
                                  20070503
                                               WO 2006-US41280
                                                                        20061023
PΙ
     WO 2007050510
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             GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
              RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
              CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
              GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
              KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA
                                  20051027
PRAI US 2005-730666P
                           P
     The invention relates to substituted hydroxytetrahydropyrrolopyrazinone
AΒ
     and substituted hydroxytetrahydropyrazolopyrazinone derivs. [I; A = saturated,
     partially saturated, or aromatic hetero(mono/bi)cyclic ring containing 1-4
     heteroatoms N, O or S and substituted by QR5; X = N, CH, C-(alkyl); R1 =
     H, (un) substituted alkyl, cycloalkyl; R2 = H, alkyl; R3 = H,
     (un) substituted alkyl; R4 = H, (un) substituted alk(yl/enyl/ynyl), N-containing
     group, etc.; Q = C1-6 alkylene, NR6, O, CO, CHOR6, SO2, CF2; R5 = C3-8
     cycloalkyl, aryl, bicyclic carbocycle, heterocycle, etc.; R6 = H, C1-6
     alkyl, aryl, heterocycle, etc.] processes for preparing them, pharmaceutical
     prepns. comprising them, and their pharmaceutical use. I are are
     inhibitors of HIV integrase and inhibitors of HIV replication, useful in
     the prevention and treatment of infection by HIV and in the prevention,
     delay in the onset, and treatment of AIDS. For instance, the invention
     compound II was prepared from N-(2,2-dimethoxyethyl)-N-methylamine and
     N-Cbz-glycine in 9 steps. Compds. I had IC50 values of \leq 1 \muM
     in an HIV integrase assay and IC50 values of <35~\mu\text{M} in an assay for
     measuring the inhibition of acute HIV infection with HeLa P4-2 cells in a
     single cycle infectivity assay.
ΙT
     701208-31-3P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
         (intermediate; preparation of substituted hydroxytetrahydropyrrolopyrazinone
        s and hydroxytetrahydropyrazolopyrazinones as inhibitors of HIV
        integrase)
RN
     701208-31-3 CAPLUS
```

Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 1,2,3,4-tetrahydro-8-hydroxy-2-

CN

methyl-1-oxo-, ethyl ester (CA INDEX NAME)

T. 4

```
ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
     2005:1240816 CAPLUS
ΑN
                                            common inventor ... no pending US appln
     144:6813
DN
     Pyrazinopyrrolopyridazines as HIV integrase inhibitors, their preparation,
ΤI
     pharmacoutical compositions, and use to prevent or treat HIV infection
     Wai, John S); Vacca, Joseph P.; Zhuang, Linghang; Kim, Boyoung; Lyle,
     Terry A:, Wiscount, Catherine M.; Egbertson, Melissa S.; Neilson, Lou
     Anne; Embrey, Mark; Fisher, Thorsten E.; Staas, Donnette D.
     Merck & Co., Inc., USA
PA
     PCT Int. Appl., 76 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
                                                  not prior
FAN.CNT 2
                         KIND
                                DATE
                                            APPLICATION NO.
     PATENT NO.
                                                                    DATE
     WO 2005110415
                                20051124
                                             NO 2005-US15334
                                                                    20050503
PΙ
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         W: AE, AG, AL, AM, AT, AU, AZ,
             SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
             ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
PRAI US 2004-569150P
                          Р
                                20040507
    MARPAT 144:6813
OS
     The invention relates to hydroxy-substituted pyrazinopyrrolopyridazinedion
AΒ
     e compds. of formula I, which are inhibitors of HIV integrase and
     inhibitors of HIV replication. In compds. I, R1 is C1-4 alkyl or
     (un) substituted C3-6 cycloalkyl-C1-4 alkyl; R2 is H or C1-4 alkyl, or R1
     and R2 form (un) substituted -(CH2)n-, where n is 3-5, resulting in a 5- to
     7-membered heterocyclic ring; R3 is H or (un)substituted C1-4 alkyl, or R2
     and R3 together with the carbon atoms, to which they are bonded, form
     (un) substituted 3- to 6-membered carbocycle, (un) substituted benzene, or
     (un) substituted 6-membered heteroaryl ring containing 1 or 2 nitrogen atoms;
     R4 is selected from H, OH, CN, halo, nitro, (un) substituted C1-4 alkyl,
     C1-4 (halo)alkoxy, (un)substituted amino, etc.; L is CH2, CH2CH2, or
     CH(CH3); R5 is (un)substituted Ph or (un)substituted 9- or 10-membered
     benzo-fused heterocyclic ring containing 1 or 2 heteroatoms independently
     selected from N, O, and S; R6 is H; and R7 is H or C1-4 alkyl, or R3 and
     R7, together with the carbon atom to which they are attached, form a 3- to
     6-membered saturated carbocycle. The invention also relates to the
preparation of
     I, pharmaceutical compns. comprising an effective amount of compound I, or a
     pharmaceutically acceptable salt thereof, and a pharmaceutically
     acceptable carrier; as well as to the use of the compns. in the prevention
     and treatment of infection by HIV and in the prevention, delay in the
     onset, and treatment of AIDS. Coupling of N-Cbz-glycine with
     N-(2,2-dimethoxyethyl)-N-methylamine followed by cyclization and
     hydrogenation gave piperazinone II, which underwent cyclocondensation with
     di-Et (ethoxymethylene) malonate, O-benzylation, and bromination, resulting
     in the formation of pyrrolopyrazine III. III was acetylated followed by
```

cyclization with 4-fluorobenzyl hydrazine and debenzylation to give pyrazinopyrrolopyridazine IV. The compds. of the invention express IC50 values of less than 1 μM in an HIV integrase assay for inhibition of strand transfer activity and IC95 values of less than 10 μM in an assay for inhibition of HIV replication.

IT 701208-31-3P, Ethyl 8-hydroxy-2-methyl-1-oxo-1,2,3,4 tetrahydropyrrolo[1,2-a]pyrazine-7-carboxylate 851727-07-6P,
 Ethyl (4S)-2-ethyl-8-hydroxy-4-methyl-1-oxo-1,2,3,4-tetrahydropyrrolo[1,2-a]pyrazin-7-carboxylate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of pyrazinopyrrolopyridazines as HIV integrase inhibitors)

RN 701208-31-3 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 1,2,3,4-tetrahydro-8-hydroxy-2-methyl-1-oxo-, ethyl ester (CA INDEX NAME)

RN 851727-07-6 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-ethyl-1,2,3,4-tetrahydro-8-hydroxy-4-methyl-1-oxo-, ethyl ester, (4S)- (CA INDEX NAME)

Absolute stereochemistry.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
L4
ΑN
     2005:1240815 CAPLUS
                                    common inventor ... no pending US appln
     144:6812
DN
     Preparation of hydroxy substituted pyrazinopyrrolopyridazine dione
ΤI
     derivatives as HIV integrase inhibitors
    Wai, John S.) Vacca, Joseph P.; Zhuang, Linghang; Kim, Boyoung; Lyle,
IN
     Terry Miscount, Catherine M.; Egbertson, Melissa S.; Neilson, Lou
     Anne; Embrey, Mark; Fisher, Thorsten E.; Staas, Donnette D.
     Merck & Co., Inc., USA
PA
     PCT Int. Appl., 197 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
                                                       not prior
FAN.CNT 2
                         KIND
                                            APPLICATION NO.
     PATENT NO.
                                DATE
                                                                    DATE
                         ____
     WO 2005110414
                                 20051124
                                            WO 2005-US15200
                                                                    20050503
PΙ
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     WO 2005110414
                          А3
                               20060216
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             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
     AU 2005244157
                                20051124
                                            AU 2005-244157
                                                                    20050503
                          Α1
     CA 2564372
                          Α1
                                20051124
                                            CA 2005-2564372
                                                                    20050503
     EP 1756114
                          Α2
                                20070228
                                            EP 2005-743968
                                                                    20050503
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             IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
     CN 1964975
                          Α
                                20070516
                                           CN 2005-80014492
                                                                    20050503
     IN 2006DN06367
                                20070831
                                             IN 2006-DN6367
                                                                    20061030
                          Α
PRAI US 2004-569150P
                          Ρ
                                20040507
     WO 2005-US15200
                          W
                                20050503
OS
     CASREACT 144:6812; MARPAT 144:6812
AB
     Title compds. I [R1 = (un)substituted alkyl, cycloalkyl, cycloalkylalkyl,
     etc.; R2 = H, haloalkyl, alkyl, etc.; or R1 and R2 together form a 5-7
     membered saturated heterocycle; R3 = H, haloalkyl, hydroxyalkyl, etc.; or R2
     and R3 together form a (un) substituted carbocycle, heterocycle,
     heteroaryl, or benzene ring; R4 = H, OH, CN, NO2, etc.; R5 =
     (un) substituted alkyl, cycloalkyl, cycloalkylalkyl, etc.; R6 and R7
     independently = H or alkyl; or R3 and R7 together form a (un)substituted
     carbocycle or heterocycle], and their pharmaceutically acceptable salts,
     are prepared and disclosed as inhibitors of HIV integrase and inhibitors of
     HIV replication. Thus, e.g., II was prepared in a multistep synthesis from
     N-(2,2-dimethoxyethyl)-N-(4-fluorobenzyl) amine which was obtained by
     reaction of 4-fluorobenzaldehyde with dimethoxyethylamine. In assays for
     inhibition of HIV integrase, I exhibited IC50 values of less than 1 \mu M
     while in assays for inhibition of HIV replication I exhibited IC95's of
     less than 10 \mu\text{M}\text{.} The compds. are useful in the prevention and
     treatment of infection by HIV and in the prevention, delay in the onset,
     and treatment of AIDS. The compds. are employed against HIV infection and
```

AIDS as compds. per se or in the form of pharmaceutically acceptable salts. The compds. and their salts can be employed as ingredients in pharmaceutical compns., optionally in combination with other antivirals, immunomodulators, antibiotics or vaccines.

TT 701208-13-1P 701208-31-3P 851727-07-6P

870006-56-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of hydroxy substituted pyrazinopyrrolopyridazine dione derivs. as HIV integrase inhibitors)

RN 701208-13-1 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-31-3 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 1,2,3,4-tetrahydro-8-hydroxy-2-methyl-1-oxo-, ethyl ester (CA INDEX NAME)

RN 851727-07-6 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-ethyl-1,2,3,4-tetrahydro-8-hydroxy-4-methyl-1-oxo-, ethyl ester, (4S)- (CA INDEX NAME)

Absolute stereochemistry.

RN 870006-56-7 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 6-acetyl-2-[(4-

fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

```
ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
L4
      2005:405330 CAPLUS
ΑN
                                              common inventor
      142:463759
DN
      Preparation of hydroxy pyridopyrrolopyrazine dione compounds useful as HIV
ΤI
      integrase inhibitors
     Wai, John S.; Fisher, Thorsten E.; Zhuang, Linghang; Staas, Donnette D.;
ΙN
      Lyre, Terry A.; Kim, Boyoung; Embrey, Mark W.; Wiscount, Catherine M.;
      Tran, Lekhanh O.; Egbertson, Melissa; Savage, Kelly L.
PA
      Merck & Co., Inc., USA
      PCT Int. Appl., 181 pp.
SO
      CODEN: PIXXD2
DT
      Patent
                                                           not prior
      English
LA
FAN.CNT 1
                                                       APPLICATION NO.
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                               KIND
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      WO 2005041664
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                SN, TD, TG
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                IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
      CN 1870896
                                Α
                                        20061129
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      JP 2007509149
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      IN 2006DN01547
                                        20070810
                                                       IN 2006-DN1547
                                                                                    20060322
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      US 2007093496
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PRAI US 2003-512678P
                                Ρ
                                        20031020
                                                                       no ODP
      WO 2004-US34420
                                        ~<del>20041018</del>
OS
      MARPAT 142:463759
AB
      Title compds. I [bond "m" is either single or double; bond "n" is either
      single or double and when double, R7 and R8 are absent; the central ring
      containing A and B is pyrrolyl where one of A or B equals N while the other
      equals C; R1 = (un)substituted-arylalkyl or -heteroarylalkyl; R2 = H,
      (un) substituted alkyl; R3 = H, alkenyl, haloalkyl, alkynyl, etc.; R4 = H,
      (un) substituted-alkyl, -aryl, ester, etc.; R5 = H, (un) substituted alkyl;
      R6 = H, alkyl, (un)substituted-arylalkyl, etc.; R7 = H, alkyl, or
      alternatively R5 and R7 together form oxo or thioxo or spirocycloalkyl; R8
      = H, alkyl, or alternatively R4 and R8 together form spirocycloalkyl; if
      R7 and R8 are absent, R4 and R5 together form a (un)substituted-benzene or
      a -6-membered heteroaryl ring, or a cycloalkane ring], and their
      pharmaceutically acceptable salts, are prepared and disclosed as inhibitors
      of HIV integrase and inhibitors of HIV replication. Thus, e.g., II was
      prepared via cyclocondensation of Et 3-[N-(3-ethoxy-3-oxopropy1)-N-(4-
      fluorobenzyl)]amino-3-oxopropanoate (preparation given) to form pyridine III
      which was sulfonated with trifluoromethanesulfonic acid and reacted with
```

piperazin-2-one under microwave irradiation to provide II. The compds. are

useful in the prevention and treatment of infection by HIV and in the prevention, delay in the onset, and treatment of AIDS. The compds. are employed against HIV infection and AIDS as compds. per se or in the form of pharmaceutically acceptable salts. The compds. and their salts can be employed as ingredients in pharmaceutical compns., optionally in combination with other antivirals, immunomodulators, antibiotics or vaccines.

IT 851727-07-6

RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of hydroxypyridopyrrolopyrazine dione derivs. as HIV integrase inhibitors)

RN 851727-07-6 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-ethyl-1,2,3,4-tetrahydro-8-hydroxy-4-methyl-1-oxo-, ethyl ester, (4S)- (CA INDEX NAME)

Absolute stereochemistry.

IT 701208-13-1P 701208-15-3P 701208-31-3P

851726-52-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of hydroxypyridopyrrolopyrazine dione derivs. as HIV integrase inhibitors)

RN 701208-13-1 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-15-3 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, 2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-N-methyl-1-oxo- (CA INDEX NAME)

RN 701208-31-3 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 1,2,3,4-tetrahydro-8-hydroxy-2-methyl-1-oxo-, ethyl ester (CA INDEX NAME)

RN 851726-52-8 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, 6-bromo-2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-N-methyl-1-oxo- (CA INDEX NAME)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
L4
      2004:467687 CAPLUS
ΑN
     141:38630
DN
      Preparation of 8-hydroxy-1-oxo-tetrahydropyrrolopyrazine compounds as HIV
ΤI
      integrase inhibitors
IN
      Wai, John S.
PA
      Merck & Co., Inc., USA
      PCT Int. Appl., 85 pp.
SO
      CODEN: PIXXD2
                                                              Appl. WIPO
DT
      Patent
      English
LA
FAN.CNT 1
                                                  APPLICATION NO.
      PATENT NO.
                           KIND DATE
                                                                             DATE
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      WO 2004047725
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          W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
               CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
          CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, F1, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, F1, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, RF RT CF CG CT CM GA, GN, GO, GW, MI, MR, NE, SN, TD, TG
               BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
      CA 2498566
                                  20040610 CA 2003-2498566 20030910
                              Α1
                                                   AU 2003-302382
      AU 2003302382
                              Α1
                                     20040618
                                                                               20030910
                                     20050615
      EP 1539714
                              Α2
                                                   EP 2003-812013
                                                                               20030910
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
      JP 2005538184
                             Τ
                                                    JP....2004...555293
                                   20051215
                                                                               20030910
                                                  US 2005-526280
      US 2005288293
                              Α1
                                     20051229
                                                                               20050301
PRAI US 2002-409745P
                              Ρ
                                     20020911
      WO 2003-US28363
                              W
                                     20030910
OS
     MARPAT 141:38630
      8-Hydroxy-1-oxo-tetrahydropyrrolopyrazine compds. of formula I [R1 = H,
AΒ
      alkyl, cycloalkyl, etc.; R2 = H, alkyl; R3 = H, alkyl, haloalkyl, CN,
      nitro, etc.; R4 = H, alkyl, acyl, etc.; R5 = H, alkyl; R6 = OH, alkoxy,
      (substituted) NH2, arylalkoxy, etc.] are prepared as inhibitors of HIV
      integrase and inhibitors of HIV replication. The compds. are useful in
      the prevention and treatment of infection by HIV and in the prevention,
      delay in the onset, and treatment of AIDS. The compds. are employed
      against HIV infection and AIDS as compds. per se or in the form of
      pharmaceutically acceptable salts. The compds. and their salts can be
      employed as ingredients in pharmaceutical compns., optionally in
      combination with other antivirals, immunomodulators, antibiotics or
      vaccines. Methods of preventing, treating or delaying the onset of AIDS
      and methods of preventing or treating infection by HIV are described.
      Thus, II was prepared from 1-benzylpiperazin-2-one (preparation given) and
di-Et
      ethoxymethylenemalonate. The prepared compds. had IC50 < 1.5 \muM against
      HIV integrase.
      701208-11-9P 701208-13-1P 701208-19-7P
ΙT
      701208-23-3P 701208-24-4P 701208-26-6P
      RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
      preparation); THU (Therapeutic use); BIOL (Biological study); PREP
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(Preparation); RACT (Reactant or reagent); USES (Uses) (preparation of hydroxyoxo-tetrahydropyrrolopyrazine compds. as HIV

integrase inhibitors)

RN 701208-11-9 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 1,2,3,4-tetrahydro-8-hydroxy-1-oxo-2-(phenylmethyl)-, ethyl ester (CA INDEX NAME)

$$\begin{array}{c|c} O \\ C \\ C \\ O \\ \end{array}$$

RN 701208-13-1 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-19-7 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(3-chlorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-23-3 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(3,4-difluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-24-4 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(4-chlorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-26-6 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(3,4-dichlorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

IT 701208-12-0P 701208-14-2P 701208-15-3P

701208-16-4P 701208-17-5P 701208-20-0P

701208-21-1P 701208-22-2P 701208-25-5P

701208-27-7P 701208-28-8P 701208-29-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of hydroxyoxo-tetrahydropyrrolopyrazine compds. as HIV integrase inhibitors)

RN 701208-12-0 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 1,2,3,4-tetrahydro-8-hydroxy-1-oxo-2-(phenylmethyl)- (CA INDEX NAME)

RN 701208-14-2 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo- (CA INDEX NAME)

RN 701208-15-3 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, 2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-N-methyl-1-oxo- (CA INDEX NAME)

RN 701208-16-4 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, N-ethyl-2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo- (CA INDEX NAME)

RN 701208-17-5 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, N-cyclopropyl-2-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo- (CA INDEX NAME)

RN 701208-20-0 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(3-chlorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo- (CA INDEX NAME)

$$\begin{array}{c|c} \text{C1} & \text{O} & \text{OH} \\ \hline \\ \text{CH}_2 & \text{N} & \text{N} \end{array}$$

RN 701208-21-1 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, N-[(4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-2-methyl-1-oxo- (CA INDEX NAME)

$$\begin{array}{c|c} & & & \\ & & \\ & & \\ \text{Me} & & \\ &$$

RN 701208-22-2 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(3-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-25-5 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 2-[(3-chloro-4-fluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-1-oxo-, ethyl ester (CA INDEX NAME)

RN 701208-27-7 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, 2-[(4-chlorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-N-methyl-1-oxo- (CA INDEX NAME)

RN 701208-28-8 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, 2-[(3,4-difluorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-N-methyl-1-oxo- (CA INDEX NAME)

RN 701208-29-9 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxamide, 2-[(3,4-dichlorophenyl)methyl]-1,2,3,4-tetrahydro-8-hydroxy-N-methyl-1-oxo- (CA INDEX NAME)

IT 701208-31-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of hydroxyoxo-tetrahydropyrrolopyrazine compds. as ${\tt HIV}$ integrase inhibitors)

RN 701208-31-3 CAPLUS

CN Pyrrolo[1,2-a]pyrazine-7-carboxylic acid, 1,2,3,4-tetrahydro-8-hydroxy-2-methyl-1-oxo-, ethyl ester (CA INDEX NAME)

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(FILE 'HOME' ENTERED AT 08:18:50 ON 27 NOV 2007)

FILE 'REGISTRY' ENTERED AT 08:19:07 ON 27 NOV 2007

STRUCTURE UPLOADED L1

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L45 S L3

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COST IN U.S. DOLLARS SINCE FILE TOTAL

ENTRY SESSION 200.03 FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL

ENTRY SESSION
0.00 -3.90 CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 08:20:53 ON 27 NOV 2007